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The Secretary of Energy
Washington, DC 20585

January 19, 2001

MEMORANDUM FOR HEADS OF ALL DEPARTMENTAL ELEMENTS

FROM: BILL RICHARDSON

SUBJECT: Internal Reuse and Recycling at Department of Energy Facilities

On July 13, 2000, I challenged the Department to find creative ways to reuse and recycle materials among our sites. I am encouraged by Departmental actions taken to date to meet this challenge.

The Department is committed to deploying internal reuse and recycling options, when such activities are cost effective, and protective of workers, the public, and the environment. The Department of Energy (DOE) sites, in coordination with the DOE National Center for Excellence in Metal Recycle (NMR), are responsible for implementing a Department-wide program to internally reuse and recycle materials and equipment from radiological areas. I expect all Department employees to utilize tools such as the Material Exchange (http://wastenot.er.doe.gov/doematex) and the Federal Property Management System and also to work with field pollution prevention coordinators, the NMR, and property management staff to foster internal reuse and recycling.

I am pleased to report that a number of efforts are already underway that will provide the Department with long-term internal reuse and recycling alternatives in lieu of the disposal of valuable resources.

Both the Office of Energy Efficiency (EE) and EM responded to my request that the Department quickly evaluate various electric furnace technologies that might provide cost-effective and safe internal recycling opportunities for large quantities of the Department's surplus metal inventories taken from radiological areas. While the initial analysis does not warrant significant DOE investment in large scale electric furnace metal-melt technologies, a number of innovative and commercially viable recycling opportunities were identified during the study. Further evaluations of commercial solutions for metal and equipment reuse and recycling are being conducted (Terry Plummer, EM-22, 301-903-7176).

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2. DOE is the steward of large quantities of excess lead, and lead products, from radiological areas. In the past, this lead would often be declared a mixed waste and then disposed of at great cost. A team of DOE and commercial vendors has developed a cost-effective and safe internal recycling path for much of this excess lead inventory as shielding material. The DOE NMR, together with industrial partners, have successfully fabricated needed shielded waste containers by recycling excess lead from radiological areas. The Department will invest over $500,000 during FY 2001 to promote internal lead recycling opportunities. A formal DOE Lead Recycling Policy statement has been issued under a separate document. If DOE sites have either a need for shielded containers or surplus lead, this new recycling option should be fully evaluated (Richard Meehan, NMR, 865-576-2598).

3. The NMR and EM, together with DOE Nevada and Bechtel Nevada, will conduct a 'proof of principle' reuse demonstration on transuranic (TRU) contaminated metal parts. Instead of following the traditional and costly disposition path for these TRU contaminated classified surplus weapons parts and components, the team will demonstrate the recycling of a portion of this inventory as feedstock during the production of needed shield blocks. Excess contaminated equipment from the Mound Site will be used during this demonstration. The process of blending TRU contaminated metal parts with other surplus steel from low level radiological areas offers the potential of supporting the recycling of large quantities of slightly contaminated surplus steel from around the complex (Richard Meehan, NMR, 865-576-2598).

4. Excess nickel with residual contamination is a potentially valuable resource that is available mostly from the former Gaseous Diffusion Plants decommissioning activities. EM, in coordination with the Office of Civilian Radioactive Waste Management, will investigate recycling the nickel for potential use within the planned high-level waste repository. This effort could preclude the need to purchase nickel from the commercial market and establish a disposition pathway for large quantities of contaminated nickel. (John Neave, EM-32, 301-903-7678).

We anticipate other innovative internal recycle and reuse opportunities will be uncovered for surplus metals and equipment from radiological areas in the near future. The Department is committed to exploring new recycling opportunities as we accomplish our missions.